

ABSTRACT

An alkaline earth metal-containing MFI zeolite catalyst is used when synthesizing a lower hydrocarbon from dimethyl ether and/or methanol, which has a

5 Si/Al atomic ratio ranging from 30 to 400, an alkaline earth metal/Al atomic ratio ranging from 0.75 to 15, and an average particle diameter ranging from 0.05 to 2 μm .